

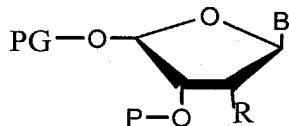
-2-

58. (New) A compound of Claim 57, wherein said oxygen atom is a C-3' oxygen of a ribonucleoside phosphoramidite or a ribonucleoside H-phosphonate.

59. (New) A compound of Claim 58, wherein said oxygen atom is a C3' oxygen of a ribonucleoside deoxyribonucleotide phosphoramidite or a deoxyribonucleoside H-phosphonate.

60. (New) A compound of Claim 57, wherein said oxygen atom is a C-3' oxygen of a natural nucleoside phosphoramidite.

61. (New) A compound of Claim 57, having the formula:



wherein

B is selected from the group consisting of natural or synthetic adenine, natural or synthetic guanine, natural or synthetic thymine, natural or synthetic cytosine, and natural or synthetic uracil;

R is selected from the group consisting of hydrogen, protected hydroxy, halogen and alkoxy;

P is an activated phosphorus group,

PG is photoremovable protected group selected from the group consisting of NVOC, MeNPOC, NPOC, MenVOC and phrenylmethyloxycarbon.

62. (New) A compound of Claim 61, wherein R is hydrogen or protected hydroxy.

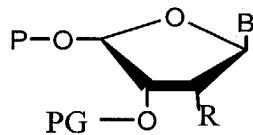
-3-

63. (New) A compound of Claim 61, wherein P is selected from the group consisting of phosphoramidite, phosphochloridite, an H-phosphonate group and a 2-cyanoethylphosphoramidite group.

64. (New) A compound of Claim 61, wherein B is selected from the group consisting of adenine, thymine, uracil, cytosine and guanine.

65. (New) A compound of Claim 61, wherein B is selected from the group consisting of adenine, thymine, uracil, cytosine and guanine, R is hydrogen or protected hydroxy, or alkoxy, P is a 2-cyanoethylphosphoramidite group.

66. (New) A compound of Claim 57, having the formula:



wherein

B is selected from the group consisting of natural or synthetic adenine, natural or synthetic guanine, natural or synthetic thymine, natural or synthetic cytosine, and natural or synthetic uracil;

R is selected from the group consisting of hydrogen, protected hydroxy, halogen and alkoxy;

P is an activated phosphorus group,

PG is photoremovable protected group selected from the group consisting of NVOC, MeNPOC, NPOC, MenVOC and phrenylmethyloxycarbon.

67. (New) A compound of Claim 66, wherein R is hydrogen or protected hydroxy.

68. (New) A compound of Claim 66, wherein P is phosphoramidite, or phosphochloridite, or an H-phosphonate group or a 2-cyanoethylphosphoramidite group.
69. (New) A compound of Claim 66, wherein B is selected from the group consisting of adenine, thymine, uracil, cytosine and guanine.
70. (New) A compound of Claim 66, wherein B is selected from the group consisting of adenine, thymine, uracil, cytosine and guanine, R is hydrogen or protected hydroxy, or alkoxy, P is a 2-cyanoethylphosphoramidite group.
71. (New) A method for preparing a compound of Claim 57, said method comprising attaching a photoremovable protecting group to C-3' or C-5' oxygen atom of a natural or synthetic nucleoside and subsequently attaching an activated phosphorous group.
72. (New) A method of Claim 71, wherein said compound is selected from the group consisting of natural phosphoramidites and natural nucleoside H-phosphonates.
73. (New) A method of Claim 71, wherein said compound is selected from the group consisting of natural deoxyribonucleoside phosphoramidites.
74. (New) A method of activating a terminal nucleotide in a nucleic acid, said terminal nucleotide having a photoremovable protecting group, said method comprising removing said photoremovable protecting group from a latent C3' or C-5' hydroxy moiety in said nucleic acid.